

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/EP2004/051191

International filing date (day/month/year)
22.06.2004

Priority date (day/month/year)
26.06.2003

International Patent Classification (IPC) or both national classification and IPC
H04Q11/04

Applicant
MARCONI COMMUNICATIONS SPA

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITYInternational application No.
PCT/EP2004/051191

IAP20 Rec'd PCT/PTO 23 DEC 2005

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2004/051191

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-19
	No: Claims	
Inventive step (IS)	Yes: Claims	1-19
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-19
	No: Claims	

2. Citations and explanations

see separate sheet

IAP20 Rec'd PCT/PTO 23 DEC 2005**Re Item V.**

1 The following documents are referred to in this communication:

D1 : EP 1 001 648 A (LUCENT TECHNOLOGIES INC) 17 May 2000 (2000-05-17)

2 Document D1, which is considered to represent the most relevant state of the art, discloses (the references in parenthesis applying to this document):

A switching network (Fig.1) for switching frames of data ("data block"), in defined time-slots, of a crossconnection request between a desired input and desired output, comprising

- an input stage consisting of a plurality of switching matrices (140-148),
 - an intermediate stage consisting of a plurality of switching matrices (150-158), and
 - an output stage consisting of a plurality of switching matrices (160-168),
- each input stage switching matrix having a link to each intermediate stage switching matrix (Fig.1) and
each intermediate switching matrix having a link to each output stage (Fig.1),
the switching network including means for routing each time-slot ("bit pack") of each frame through the switching matrices.

The subject-matter of independent claim 1 differs from the switching network of D1 in that in claim 1, the switching network includes means for routing each time-slot of each frame independently through the switching matrices.

3 The subject-matter of claim 1 is therefore novel (Article 33(2) PCT). The problem to be solved by the present invention may be regarded as:
how to increase the capacity of the switching network without unduly increasing the costs.

4 The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:
In D1, the time-slots of each frame are evenly distributed to the second stage switching matrices to optimize the size and speed of implementation. D1 leads therefore the skilled person away from the solution proposed in claim 1 where each time-slot of each frame is routed independently.

The skilled person would therefore not arrive at the solution proposed by the invention either using D1 alone or in combination with any other prior knowledge.

5 The same reasoning applies, *mutatis mutandis*, to the subject-matter of the corresponding independent claim 15, which therefore is also considered inventive.

6 Claims 2-14 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

7 Claims 16-19 are dependent on claim 15 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

From the INTERNATIONAL BUREAU

PCTNOTIFICATION CONCERNING
TRANSMITTAL OF COPY OF INTERNATIONAL
APPLICATION AS PUBLISHED OR REPUBLISHED

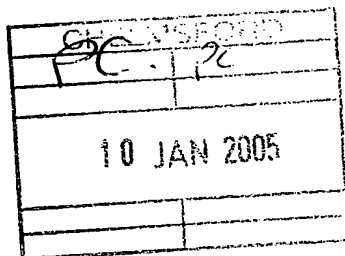
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Date of mailing (day/month/year) 06 January 2005 (06.01.2005)		
Applicant's or agent's file reference P/63769/X18		IMPORTANT NOTICE
International application No. PCT/EP2004/051191	International filing date (day/month/year) 22 June 2004 (22.06.2004)	
		Priority date (day/month/year) 26 June 2003 (26.06.2003)
Applicant MARCONI COMMUNICATIONS SPA et al		

The International Bureau transmits herewith the following documents:

- ☒ copy of the international application as published by the International Bureau on 06 January 2005 (06.01.2005) under No. WO 2005/002276
- ☐ copy of international application as republished by the International Bureau on under No. WO
For an explanation as to the reason for this republication of the international application, reference is made to INID codes (15), (48) or (88) (as the case may be) on the front page of the attached document.



The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Yolaine Cussac
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